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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/830,217	04/23/2004	Parthasarathy Ranganathan	200403365-1	9027
22879	7590	08/21/2007		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER CONNOLLY, MARK A	
			ART UNIT	PAPER NUMBER
			2115	
			MAIL DATE	DELIVERY MODE
			08/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/830,217

Applicant(s)

RANGANATHAN,  
PARTHASARATHY

Examiner

Mark Connolly

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 29-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-26 is/are allowed.
- 6) ☒ Claim(s) 1,2,12,13,22,29,30 and 34-36 is/are rejected.
- 7) ☒ Claim(s) 3-11,14-21,27,28 and 31-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/23/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-27 and 29-36 have been presented for examination.
2. Applicant's arguments with respect to claims 1-27 and 29-36 have been considered but are moot in view of the new ground(s) of rejection.

#### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 12-13, 22, 29-30 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Wurzburg et al [Wurzburg] US Pat No 5546591.
5. Referring to claim 1, Wurzburg teaches the method of selecting I/O devices to control power consumption of a computer system comprising:
  - a. determining a power consumption metric for each of a plurality of I/O devices connected to the computer system while the plurality of I/O devices are connected to the computer system, wherein the plurality of I/O devices are user interfaces for the computer system and are configured to be used by a user to input information to the computer system or to output information from the computer system [col. 1 lines 19-25 and col. 3 lines 23-28].
  - b. selecting at least one of the plurality of I/O devices based on the determined power consumption metric [col. 3 lines 23-28].

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- c. reducing power consumption of the at least one selected I/O device[col. 3 lines 23-28].
- 6. Referring to claim 12, Wurzburg teaches that in addition to controlling the power to the I/O devices, the power to the devices is also controlled based on when the functions of the devices are required or not [col. 1 lines 38-39]. This includes forwarding activity information for each device to an activity monitor [col. 3 lines 3-28]. It is implied that if an I/O device is currently active, its functions are required and therefore would not be powered off.
- 7. Referring to claim 13, Wurzburg teaches the power consumption metric comprises the power requirements for each of the I/O devices [col. 3 lines 23-28].
- 8. Referring to claim 22, this is rejected on the same basis as set forth hereinabove.
- 9. Referring to claim 29, this is rejected on the same basis as set forth hereinabove. Wurzburg teaches the method and therefore teaches the software performing the method.
- 10. Referring to claims 35 and 36, Wurzburg teach the I/O devices comprise a keyboard and display which are well known to be used in combination with software [col. 1 lines 23-25].

***Claim Rejections - 35 USC § 103***

- 11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 2 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wurzburg as applied to claims 1-2, 12-13, 22, 29-30 and 34-36 above, and further in view of Evoy<sup>1</sup>.

13. Referring to claim 2, although Wurzburg teaches powering off I/O devices depending on their respective power requirements, it not explicitly taught to identify the top power consuming devices and selecting at least one of the top consuming devices to reduce their power consumption. Evoy teaches that in power managed systems, top power consuming devices are more likely to be turned off first [col. 2 lines 44-56]. This obviously further reduces the power consumption of the system by powering off a greater power consuming device rather than lesser power consuming device. It would have been obvious to identify the top power consuming I/O devices in Wurzburg and power them off first because it would provide a further reduction in power as opposed to powering off devices which consume less power first.

14. Referring to claim 30, this is rejected on the same basis as set forth hereinabove.

15. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hepner et al [Hepner] US Pat No 7134029 in view of Lippert et al [Lippert] US Pat No 7017061.

16. Referring to claim 34, Hepner teaches the invention substantially including:

- d. a processor [abstract and col. 6 lines 19-22].
- e. a battery wherein the processor is able to determine a power consumption metric for each of a plurality of I/O devices connected to the computer system, select at least one of the plurality I/O devices based on the determined power consumption metric and an

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<sup>1</sup> As cited in the previous office action.

estimation of future power consumption based on the power consumption metric for each of the plurality of I/O devices for a period of time in the future, and control the at least one selected I/O device to reduce power consumption [col. 1 lines 57-60, col. 5 lines 14-17 and col. 9 lines 6-14 and 46-54]. Although not explicitly taught, Hepner implicitly suggests that the computer system provides an improvement even within systems comprising a battery.

Although Hepner teaches determining power consumption metrics, estimating a future power consumption and controlling at least one I/O device to reduce power consumption, it is not explicitly taught that it is in response to a remaining battery life falling below a threshold. Lippert explicitly teaches that a “total power discharge capacity of the battery drops with total charge available due to use of the battery over time” [abstract and col. 4 lines 25-35]. In other words, as the battery discharges due to use, the available output power from the battery reduces as well. Thus, it becomes necessary to conserve power as the battery charge decreases. It would have been obvious to one of ordinary skill in the art at the time of the invention to monitor a battery capacity in the Hepner system and to cause the devices to operate at a lower power threshold level as the battery charge decreases because it would prevent any inadvertent shutdowns from occurring due to a shortage of power supplied from the battery.

***Allowable Subject Matter***

17. Claims 23-26 are allowed.
18. Claims 3-11, 14-21, 27-28 and 31-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

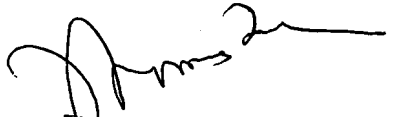
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark Connolly  
Examiner  
Art Unit 2115

mc  
August 13, 2007



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